CLAIMS

1. A data managing method for a removable storage device having a replaceable memory chip, characterized in that said method comprises:

1) determining the use condition of said memory chip, and applying or organizing or establishing or re-establishing a file managing system for the storage medium of said removable storage device; and

2) utilizing said file managing system to perform corresponding processing in said memory chip according to an operation instruction from a host system connected to said removable storage device.

2. The data managing method according to claim 1, characterized in that the step for determining the use condition of said memory chip in step 1) comprises:

a controller of the removable storage device reads the amount of the memory chips installed in the removable storage device, and obtains information of storage capacity of each said memory chip.

3. The data managing method according to claim 2, characterized in that the said method further comprises:

said host system generates one or more disk descriptors for the removable storage device according to the information of the memory chips of said removable storage device.

4. The data managing method according to claim 3, characterized in that:
the number of the disk descriptors of the removable storage device is equal to the number of the memory chips installed in the removable storage device.

5. The data managing method according to claim 3, characterized in that:

the memory chip of the removable storage device is divided into a plurality of partitions, the number of the disk descriptors of the removable storage device is equal to the number of the partitions.

6. The data managing method according to claim 1, characterized in that:

the memory chips include used memory chips and/or unused memory chips, the unused memory chips being original chips that have not been initialized or partitioned, and the step 1) further includes:

determining whether the memory chips are used memory chips or unused memory chips, or include used and unused memory chips;

with respect to the unused memory chip, formatting the chips and establishing the file managing system;

in the situation that there are only used memory chips, adopting the original file managing system thereof, or re-combining, modifying the file managing information and establishing new file managing system.

7. The data managing method according to claim 2, characterized in that:

the installed memory chips are installed on the basis of the existing removable storage device.

8. The data managing method according to claim 6, characterized in that:

determining the used memory chips include reading the logical "0" blocks of the memory chips, determining that the memory chips are used chips if no all logical "0" blocks are logical value "1", and determining that the memory chips are unused chips if all logical "0" blocks are logical value "1".

9. The data managing method according to claim 1, characterized in that:

the types of the file managing system include file managing system supporting Windows and its updated version, or file managing system supporting UNIX or LINUX and their updated version,

wherein the file managing system supporting Windows and the updated version includes but is not limited to: FAT12, VFAT, FAT16, FAT32, CDFS, NTFS;

the file managing system supporting UNIX or LINUX and their updated version includes but is not limited to: EXT2, EXT3, JFFS, NFS, RAMFS, HPFS, CRAMFS.

10. The data managing method according to claim 1, characterized in that performing corresponding operation in the memory chips includes steps of:

reading designated address in the operation instruction, and transforming the designated address into physical address;

comparing the physical address with capacity of the memory chips, determining the corresponding memory chip, and finding corresponding storage block in the determined memory chip.

11. The data managing method according to claim 10, characterized in that it further includes:

the removable storage device returns error information if the physical address exceeds the storage capacity of all memory chips of the storage device.

12. The data managing method according to claim 1, characterized in that it further includes:

the host system stops to supply power to the removable storage device or the controller of the removable storage device when replacing the memory chips for the removable storage device.

13. The data managing method according to any of claims 1-8, characterized in that:

setting data encryption area in the memory chips, and performing encryption or decryption to the stored data by the controller of the removable storage device.